

## DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

CERTIFIED MAIL



TED SCHWINDEN, GOVERNOR

COGSWELL BUILDING

STATE OF MONTANA

HELENA, MONTANA 59620

June 23, 1986

Mr. Ken Reick  
Columbia Falls Aluminum Company  
P. O. Box 10  
Columbia Falls, Montana 59912

Dear Mr. Reick,

The Water Quality Bureau (WQB) has made a tentative determination that the Montana Ground Water Pollution Control (MGWPCS) Permit No. 0005 for Columbia Falls Aluminum Company (CFAC) should be modified. Please consider this a formal notification in accordance with ARM 16.25.1015. Enclosed is a draft modified MGWPCS permit for CFAC. Results of the Department's analysis of sample splits collected March 13, 1986 are also attached. Analysis for benzo(a)pyrene was not completed because of laboratory contamination problems with hexane.

The differences between the modified permit and original permit are obvious. Most of the changes are in line with what was discussed at the November 8, 1985 meeting and during my March 13, 1986 sampling visit. You will note monitoring wells downgradient of the sludge pond and north percolation ponds (NPP) were added to the monitoring requirements in #2 under Section A of the modified permit. Expansion of the ground water monitoring network into these areas is needed because of the following reasons.

1. During the November meeting you informed us that liquid from leachate collection ponds was treated and discharged to the sludge pond on at least two occasions since construction of the ponds in 1980. These discharges were conducted without prior approval from the Department. Discharges of this nature are beyond the scope of the present permit, create the potential for ground water pollution and should be addressed in a modified permit.
2. The quality and quantity of liquid discharged to the sludge pond is not known. The chemical and physical characteristics of the sludge and its ability to attenuate leachate migration is not known.
3. The hydrogeology and quality of ground water immediately downgradient of the sludge pond is unknown. Monitoring wells TW1 and TW2 are generally downgradient of the sludge pond but are nearly one-half mile away. Reliance on these two wells as indicators of pollution from the sludge pond is speculative. Monitoring wells TW3 and TW8 are adjacent to the sludge pond but are not downgradient.

MC: L.W. Smith  
TF Payne  
TF R...

4. Ground water generally flows to the southwest beneath the plant area according to the potentiometric surface map presented in the Hydrometrics report. Given the fact that the NPPs recharge ground water by design, formation of a ground water mound and flow of contaminated water to the west of the ponds would be expected. Wells TW1 and TW2 are directly south of the NPP West Pond. Samples from these wells are not representative of ground water in the area west of the NPPs.
5. Concentrations of cyanide and fluoride are elevated in well TW2. These levels are apparently the result of pot soaking operations that occurred in the north ponds from 1964 to 1977. The Hydrometrics report indicates the concentration of pollutants in wells TW1 and TW2 are trending downward apparently because cyanide and fluoride are gradually being leached away. The overall extent of ground water pollution caused by pot soaking operations is unknown. Higher concentrations of pollutants may be present in areas downgradient from these monitoring wells.

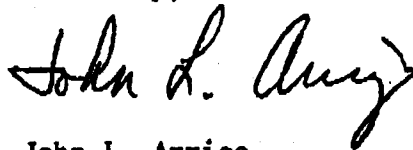
In our June 17 phone conversation you contended that additional monitoring wells were not necessary. I hope the reasons described above change your opinion. Spent pot liners will soon be relisted as a regulated RCRA hazardous waste and CFAC will be required to obtain a Part B RCRA permit. CFAC will be required to investigate possible ground water pollution from other "solid waste management areas" as part of the Part B permitting process. You have expressed reluctance to install additional monitoring wells under a WQB request because the Montana Hazardous Waste Act (MHWA) will require CFAC to do it all over again at a later date.

I do not agree with this reasoning. First of all, monitoring requested by WQB is under the authority of the Montana Water Quality Act and is separate from what is required under the MHWA. When ground water monitoring at CFAC is covered under Part B permit requirements then CFAC will be exempt from MGWPCS rules. Complete implementation of MHWA requirements however may be several years away. EPA guidance for the installation and operation of acceptable ground water monitoring networks is available. If future well installations at CFAC meet these published performance standards, separate RCRA wells may not be required. Past monitoring and ground water investigations at CFAC provide only a minimal understanding of the ground water flow system and the movement of contaminants. An expanded ground water monitoring system is needed to determine the impacts from past and current waste handling practices. Additional ground water information collected to satisfy WQB concerns will also provide valuable data necessary to fulfill future MHWA permit requirements.

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Please respond to the modified permit requirements within 45 days of receipt of this letter. I look forward to your response and continued cooperation from you and Columbia Falls Aluminim Company.

Sincerely,



John L. Arrigo  
Environmental Specialist  
Water Quality Bureau  
Environmental Sciences Division  
Phone: (406) 444-2406

JLA:gr

Encls.

cc: Roger Thorvilson, SHWB  
Bill Engle, EPA